

Dr. Gould observed, that shells in limestone waters are less liable to erosion, not from any difference in their composition, but simply because there is less tendency in such waters to abstract lime from the shell.

Prof. William B. Rogers suggested, that an analysis of shells from various waters should be made, to determine any difference in their chemical composition.

The Secretary read a letter from Dr. Samuel Kneeland on a supposed new species of *Siredon* from Lake Superior. The following account was subsequently received :

SIREDON HYEMALIS, Kneeland. From 9 to 10 inches long ; color on back olive-green, with a few small blackish spots, arranged for the most part in longitudinal rows, and with a few smaller spots varying in color from bright to rufous-yellow. A line, more distinct towards the tail, separating the olive-color of the back from the sides, which are of a purplish-brown, with more numerous yellowish spots sometimes coalescing into patches half an inch long and two lines broad ; brightest on sides of head and tail. Under surface of body of an ashy-brown color, with a more or less distinct median white line, or *linea alba* ; the yellow spots occur on the under surface of the jaw. From the nostrils, which are situated at the extreme corner of the truncated muzzle, about half an inch wide, there runs a dark line through the centre of the eye back to near the external gills ; upper and lower segment of the iris of a yellowish silvery color. Tail flattened laterally, terminating in a rounded thin edge, more mottled than any other part of the body. Gills, three in number on each side, external, provided with an immense number of exceedingly delicate fringes, of a deep red color when the animal is breathing actively ; these gills are kept waving to and fro in a most graceful manner during active respiration ; when at rest they are shrunken, still, and colorless. Just behind these gills are the anterior extremities, about an inch in length, provided with four fingers, mottled like the sides of the body ; under surface of the wrist and hand whitish, almost translucent, with the finger-tips black. About five inches further back are the posterior extrem-

ities, in size, color, and number of toes, like the anterior limbs. About three fourths of an inch behind the posterior limbs, is the vent, of a bright orange-red color, in some specimens surrounded with fringe-like projections. General shape and aspect of the head, snaky; some specimens, between the eyes and gills are much broader than others; average greatest width, just anterior the gills, $1\frac{1}{4}$ inch,—slight constriction in region of gills,—behind the last the body is cylindrical and eel-like, about an inch in diameter, gradually tapering towards the tail. The mouth is provided with sharp conical teeth, and the palatine roof is studded with them. Besides the motions of the gills, the animals suck in water which passes out by the narrow openings at the base of the gills. I have kept several of the animals for months, giving them nothing whatever to eat except what they got from the lake water, which I changed every day or two. The water of Portage Lake is very full of vegetable, and, probably, animalcular impurities, on which, doubtless, the creatures fed; but their teeth indicate more substantial food than this. They have been kept for months in clear spring water, so that the preservation of life is probably due rather to the tenacity of the vital principle in reptiles, than to any thing they find to eat in the water. The animals in my possession, have been frozen under ice half an inch thick, every night for three months, without any apparent diminution of their activity; though the water around them was not entirely frozen. I kept one an hour out of the water, during which time it became quite sluggish, occasionally opening its mouth spasmodically, as if to swallow water or air; at the end of the hour, on replacing it in the water, it soon regained its activity. Removing one entirely from the water, all motions of life had ceased at the end of four hours. Their motions in the water are very lively, and performed by the motions of the body and tail; they now and then come to the surface to take in or force out a globule of air; the last they often do under water. Their feet serve them for a slow and difficult locomotion on the bottom; when they move quickly in a jar their limbs are stretched at right angles, as if to steady the body; perhaps in a larger space they would be applied close to the body.

These animals are rarely if ever seen, except during the winter; those I obtained were sucked up through the pumps for the

supply of the water for the copper stamps ; they are never thus caught in the summer or autumn. They change their skin at this season ; I have had several with the old skin hanging to the new in shreds and patches, which are washed off by the water in two or three days, leaving the colors of the new skin very bright ; the edges of the tail are then so thin and transparent that the network of bloodvessels can be seen with the naked eye. The reason why they approach the shore at this season may be on account of this change in the skin, and possibly for breeding purposes. About once a week they pass from the anus a gelatinous mass, about the size of a pea, of a whitish color. I thought this might be possibly an egg, but the envelop soon becomes soft in the water, and its contents are lengthened out into a somewhat convoluted form. If this should not have been described, I would propose for it the name of *Siredon hyemalis*.

The Secretary read a communication from Mr. Robert Kennicott, of Chicago, informing the society that he had several living specimens of the Great-tailed Fox-Squirrel, (*Sciurus magnicaudatus*, Harlan,) which he held at the disposal of the Society or its members.

Mr. Kennicott also announced the organization of the Chicago Academy of Natural Sciences. President, Prof. J. V. Z. Blaney.

Dr. T. M. Brewer announced the organization of the California Society of Natural History, at Stockton. President, R. K. Reid ; and presented its circular, which was referred to the Council.

Messrs. James R. Gatliff, of Buenos Ayres, and Russell Loring, of Valparaiso, were elected Corresponding members.

Messrs. Edward S. Rand, Jr., and John P. Robinson, were elected Resident members.